

Atty. Docket No. YOR920010072US1
(590.044)

REMARKS

Applicant and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

Claims 1 - 25 were pending in the instant application at the time of the outstanding Office Action. Of these claims, Claims 1, 13, and 25 are independent claims; the remaining claims are dependent claims. All claims stand rejected by 35 U.S.C. § 103(a) over Nouza in view of Eide et al. (hereafter "Eide") and further in view of de Souza et al. (hereinafter de Souza). Reconsideration and withdrawal of the present rejections are hereby respectfully requested.

Claims 1, 13, and 25 recite building a model for each feature of an original set of linguistic features. Both Nouza and de Souza use feature vectors to build acoustic models. It is asserted in the Office Action that the "inclusion of Eide provides the teaching of the use of linguistic speech features ... in place of the speech features disclosed by Nouza for the benefit of improving speech recognition accuracy through contextual information provided by linguistic features." (Page 3, lines 2-7) However, one cannot simply insert linguistic features into the models and calculations performed in Nouza and de Souza. For example, Nouza uses a continuous density Hidden Markov Model in which the frame feature vector is an input into (and an integral part of) the calculations to determine the model that best matches the input speech. This CDHMM is

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explicitly used in Nouza's Discriminative Feature Analysis, which the Office asserts provides the means for ranking speech features.

It is respectfully submitted that it is technically incorrect to substitute the linguistic features into calculations made in Nouza (or de Souza). The feature vectors of Nouza and de Souza describe the properties of the acoustic signal resulting from speech production. The linguistic features of the instant invention describes the properties of speech production. With linguistic features, calculations are processed dependent on the absence or presence of certain linguistic features. With feature vectors, the contribution of a specific feature to the likelihood of the speech input being generated by a model is calculated. (Nouza, page 188, column 1, equation 9) There is no dependency on the absence or presence of the feature, but rather calculations are processed based on the value (and mean value) of the feature itself. The use of the feature in the calculation, and the layout of the values of the feature, differ from linguistic features to the feature vectors. Thus, feature vectors and linguistic features are not interchangeable or inter-useable as asserted in the Office Action.

It is respectfully submitted that there is no technically accurate or correct way for Eide to provide the teaching of the use of linguistic features in the invention of Nouza or de Souza. As shown above, one cannot simply substitute the linguistic features of Eide into the inventions of Nouza and de Souza. Further, there is no suggestion or teaching in any of the inventions to make such a substitution or alter the processes to support such a substitution. Thus, the combination of Eide with Nouza and/or de Souza is not an obvious combination. Further, and more importantly, the combination of Eide with

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Nouza and/or de Souza is not a technically sound combination, and there is no practical expectation of success with such a combination. Therefore, the 35 U.S.C. § 103(a) rejection over Nouza in view of Eide et al. and further in view of de Souza et al. presented in the outstanding Office Action is not valid, and the independent claims are presented in condition for allowance.

In view of the foregoing, it is respectfully submitted that Claims 1, 13, and 25 fully distinguish over the applied art and are thus allowable. By virtue of dependence from what is believed to be allowable independent Claims 1 and 13, it is respectfully submitted that Claims 2-12 and 14-24 are also presently allowable.

The "prior art made of record" has been reviewed. Applicant acknowledges that such prior art was not deemed by the Office to be sufficiently relevant as to have been applied against the claims of the instant application. To the extent that the Office may apply such prior art against the claims in the future, Applicant will be fully prepared to respond thereto.

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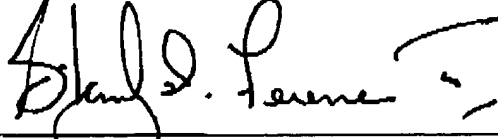
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In summary, it is respectfully submitted that the instant application, including Claims 1-25, is in condition for allowance. Notice to the effect is hereby earnestly solicited. If there are any further issues in this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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